

The influence of European pathologists throughout the world
Robin Cooke Australia

This topic will include the influence of some of these people in the following countries:

Australia and New Zealand, South Africa, India, Malaysia, Indonesia, Hong Kong, Japan, Chile, Argentina, Brazil.

The story in the US and Canada is much bigger and more complicated. Some examples will be given.

There are some interesting people who were particularly important in the spread of the European influence and special attention will be given to them.

A Cooke's tour of the Global influence of European pathologists

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These notes are designed to accompany an illustrated talk on this subject. They contain the details that will not be read at the lecture so as not to interfere with the flow of the pictorial narrative.

Europe and North Africa

There has been interaction between the Arab world and Europe for centuries. The European countries that colonised Africa established many medical schools there before independence came. Now the various European Divisions of IAP – British, French, German, Spanish, Portuguese, Hellenic are collaborating with pathologists in African countries and countries further afield to help to improve the standard of pathology.

Scotland

Edinburgh castle Oct 2003

The Edinburgh University Medical School was established in 1726. These new buildings date from 1884. From the 1800s graduates from this University have moved to many countries around the globe.

Entrance to University of Edinburgh Medical School

Courtyard of Edinburgh Medical School entered via a dark archway.

Medical School sign in the dark entrance archway to the Medical School courtyard.

Notable graduates the 3 greats of Guy's Hospital – Bright, Hodgkin and Addison.

Entrance to Guy's hospital opened in 1726 the same year as the University of Edinburgh

Thomas Guy who contributed money to build the hospital stands in the entrance driveway.

Gordon Museum in Guy's Hospital medical school building with historical specimens of Joseph Towne, a computer room and the 3 greats of Guy's Richard Bright, Thomas Hodgkin and Thomas Addison

The founders of many of the medical schools in North America were Americans who travelled to Europe to do their medical training. Later on, founders of schools in America went to Europe to buy teaching materials and to get ideas on organisation and curricula. The same type of action occurred in other 'colonial countries.'

117 of the Americans who travelled to Scotland to study medicine were awarded a degree from Edinburgh University medical school between 1749 and 1799. Benjamin Rush is mentioned as one of those and he was a founder of the Medical School of the College of Philadelphia which was the first one in America.

Philadelphia Hospital, Pennsylvania was the first hospital in America, founded in 1751 with Benjamin Franklin as one of the founders. Benjamin Rush was the Professor of Physic at the Medical College of Philadelphia in 1789.

A plaque in the entrance archway to the medical school courtyard lists the Edinburgh University medical graduates who founded the McGill University in Montreal, Canada.

I should also mention that William Boyd (1885- 1979) of ‘the silver tongue and the golden pen’ graduated from the University of Edinburgh in 1908 and emigrated to Canada in 1915. There he was Professor of Pathology at Winnipeg, Toronto, and Vancouver, where he had a profound influence on pathology in Canada, and by his writings, on the rest of the English speaking world as well.

Main entrance to the Edinburgh Royal Infirmary in October 2003. This closed in December 2001 and moved to a new hospital in Morayfield which opened in January 2002. Note the architecture that was reproduced by the graduates who set up medical schools in countries of the British Empire.

Edinburgh Royal Infirmary October 2003. Note the architecture. It closed in December 2001.

Canada

Queen Victoria statue erected at the entrance to the Royal Victoria Hospital in Montreal in 1897.

Royal Victoria Hospital in 1976

Main entrance to Royal Victoria Hospital, Montreal 2006

Entrance to McGill University October 2006 at the Centennial International Congress of IAP

James McGill emigrated to Canada from Glasgow, Scotland in 1770. He donated the farmland on which the McGill University was built in 1821.

McGill University Montreal. The oldest buildings are in the style of Edinburgh University

Pierre Masson was born in 1880 in Dijon, France, and died in Canada in 1959 at the age of 79. He was a European pathologist who left a considerable mark on the development of pathology in Canada.

He studied medicine in his hometown, and in Paris. While working there he devised the famous trichrome stains with which his name has become associated. Early in his career Masson worked at the Pasteur Institute and the Salpêtrière Hospital in Paris. After World War I. Masson was appointed to the Chair of Anatomical Pathology of Strasbourg, succeeding von Recklinghausen, Chiari and Mönckeberg. In 1923, he published a book entitled “Tumeurs: Diagnostics Histologiques.”

In 1927, answering the call of “my Canadian cousin”, Masson moved to Montreal to take the position of Chairman of Pathology at the University of Montreal, as well as

Director of Anatomic Pathology at three associated teaching hospitals (Notre-Dame, Hôtel-Dieu and Sainte-Justine). He accepted the position for a period of 3 years; however, as he noted much later, he added a zero to the three to make 30 and lived in Quebec for the remainder of his life. A revised edition of his book on “Tumeurs” appeared in 1956, and an English translation was published in 1970.
(Giles Tremblay and Rick Fraser)

H250 View of Dijon from the roof of the cathedral looks down on spires and coloured tile roofs which are a feature of the architecture in this region of France. 27-11-84

H247 Dijon 27-11-84 les toits peints

H 249 27-11-84 Dijon Painted tile roofs Les Toits peints

Plaque on the wall of the Osler building in McGill University to William Osler. It is the anatomy building and it once housed Maude Abbott's pathology museum. Osler graduated in Medicine from McGill, serving on the staff as Professor of medicine and pathology until 1884 when he moved to the University of Pennsylvania. In 1889 he joined the staff of the Johns Hopkins Hospital, Baltimore and in 1893 he became one of the four founding Professors of the medical school.

AFIP calendar 2002. Johns Hopkins hospital with the portrait of the 4 founding Professors

In 1903 he accepted the position of Regius Professor of Medicine in Oxford University, England where he was a much sought after lecturer. He died there in 1919 possibly from the ‘Spanish influenza.’ He is perhaps the most famous of the ‘colonial’ doctors who went to Europe to help influence medicine there. There were many of these. It could be regarded as a reverse brain drain, or perhaps just the normal movement of academics.

New Zealand

Otago University Dunedin, New Zealand. The University was founded in 1869 and the Faculty of Medicine in 1875. Almost all the Professors in the Faculty of Medicine were from the University of Edinburgh. The south island of New Zealand was settled predominantly by Scottish immigrants. Gold was found about this time and a profitable rural economy was quickly established. The main city was called Dunedin (Little Edinburgh.)

Australia

Melbourne

I 582 In Australia, the University Medical Schools in Sydney, Melbourne, and Adelaide were all established around 1860 and the foundation professors were all graduates of Scottish Universities, mostly the University of Edinburgh. The Professor of Anatomy, Physiology and Pathology in Melbourne was George Halford (1824-1910) a graduate of St Andrew's University, Scotland. One of the advisers to the appointments committee in Melbourne was a doctor John McAdam a graduate of Glasgow University, who had long red hair, a flowing red beard and a booming voice. He later became a politician. He asked James Paget to select someone who could be the Professor of Anatomy, Physiology and Pathology.

Paget chose Halford because 'he showed signs of becoming a promising physiologist' having just written a paper on the physiology of the action and sounds of the heart in animals, birds and man. Before he left England he was given 500 pounds to buy specimens and teaching aids that would be useful when he arrived in Melbourne in 1862. Some of the things he bought are still exhibited in the Pathology Museum in Melbourne.

One of his purchases was this preparation of a flute player who used to beg on the steps of one of the churches in Paris. He has the sirenomalous (mermaid) deformity. The information which accompanied the preparation says he was a male aged 28 at the time of his death. Xrays show that the bones are real so he is not a fake, but I thought that this anomaly was not compatible with life.

Halford became Dean in 1876 and remained as Dean until 1896 when he was 72. He never wrote another paper after leaving England, and having been appointed for life he had to be removed at the age of 72. He was 'retired' on a half pension and died at 96.

He was replaced as Professor of Pathology by Harry Brookes Allen, born in Geelong, Australia, and a graduate of the University of Melbourne. He was a good teacher and administrator and established a large collection of pathology specimens that still form much of the collection of the Medical school.

I 573 This is another of the purchases of George Halford in 1862. It is one of the wax dermatological models made by the famous Parisian moulageur, Jules Baretta of the dermatology hospital, Hopital St. Louis. It shows hands affected by sporotrichosis which is an extremely rare disease in Melbourne.

I 577 Uni Melbourne Pathology Museum. There are a number of other wax models in the Museum, but it is not clear whether they were made by a modeller in Melbourne or whether they were purchased in Paris by George Halford. There were many other moulageurs in Paris at the time of Baretta, but he was clearly the master.

Wax model in Uni of Melbourne Pathology Museum. A radiation induced skin cancer on the hand of an early radiologist.

Wax model in Uni of Melbourne Pathology Museum showing regression of a BCC with the application of local radiation.

Adelaide

All of the foundation professors in the Adelaide Medical School were graduates of the University of Edinburgh. The Professor of pathology was Archibald Watson. In 1907 he presented this skeleton of a teenage male who had been bedridden with Hydrocephalus for many years before his death as a Christmas present to Harry Brookes Allen of Melbourne Uni Pathology department.

Sydney

In Sydney the Faculty of Medicine started teaching in 1856 and the University Medical School was opened in the grounds of the Royal Prince Alfred Hospital in 1862. The foundation Professor of Anatomy and Physiology was Thomas Stuart a graduate of the University of Edinburgh. He soon became Dean and held this position until his death in 1920. He then appointed three other professors who were graduates from the University of Edinburgh, a Professor of Surgery, Alexander Scot Skirving in

1883 who became a prominent surgeon whose name is commemorated by the large lecture theatre named after him. A professor of Anatomy JT Wilson in 1890, and a professor of Pathology DA Welsh in 1902.

The European influence on the younger medical schools in Australia came from Australians travelling to Europe and bringing back ideas and teaching material in a similar way to what was done in North America.

Brisbane

The University of Queensland Medical School in Brisbane was established in 1936. The foundation Professor of Pathology, James V. Duhig, was born in Brisbane and did his postgraduate training in pathology in England after WW1. He made a tour of Europe in 1935 to look at medical school curricula and to purchase some teaching aids. He visited the UK but was particularly taken by the German methods.

Medical School of the University of Queensland. A fine bronze statue of Hippocrates made by Brisbane sculptor Phillip Piperides was erected a few years ago by the father of one of the prominent medical graduates. Photo taken 16-05-07

Wax model of Yaws in the Marks Hirschfeld Museum at University of Queensland Medical School. Probably purchased by James Duhig in Vienna in 1935.

Wax model of lepromatous leprosy in the Marks Hirschfeld Museum at the University of Queensland Medical School. Probably purchased by James Duhig in Vienna in 1935 when he went to Europe to look at medical schools and to buy teaching aids. He also bought 3 inch glass projection slides with anatomical drawings on them.

Perth

The Medical School in the University of Western Australia in Perth was established post WW2. The foundation Professor of Medicine was from England, the Dean was from Edinburgh after working in Beijing and Hong Kong, China. The Professor of pathology was a graduate of the University of Leiden, Holland. This was Rolf ten Seldam who was born in Java, and had experience of Tropical Medicine. So he brought European teaching and an interest in global medicine (which he shared with the Dean) to the University.

India

India was controlled by Britain in the 1800s and the first half of the 1900s. Calcutta (now Kolkata) was the centre of British rule. The Calcutta Medical College was opened on January 28, 1835.

Jan 1, 1836 is regarded as being a landmark occasion when the first Indian medical students rising above all prejudice and superstition undertook anatomical dissections, and in so doing instituted Western Medicine and Science in India.

Madras Medical College opened on February 2, 1835 and thus became the second Medical School in India.

Bombay followed a little later when the Grant Medical College opened in 1845. It was named after the Governor of the province who had spent so much time and effort in getting the necessary approvals to have the College started.

All of the medical colleges were staffed by highly qualified British doctors. In Bombay in particular they were supported both in principle and with money by some of the local Indian rulers.

In 1911 the first Indian professor was appointed in Calcutta, and gradually the staffs of the various colleges were replaced by Indians.

It is of interest that Robert Koch from Berlin did his work on the *Vibrio cholerae* organism in Bombay.

The Calcutta School of Tropical Medicine was established in the late 1800s. (Photo in 1989.) One of the most famous doctors to be connected with this Institute was Ronald Ross who discovered the transmission of malaria by anopheline mosquitoes.

Bust and medallion to Ronald Ross in the foyer of the Calcutta School of Tropical Medicine. The school and all the buildings along the street had large cracks in their structure from blasting done to dig a hole for the underground covered train tunnel along the street.

Building in the grounds of the post graduate medical hospital in Calcutta. This was the laboratory in which Ronald Ross did his experiments with transmission of bird malaria by anopheline mosquitoes. When Kamal Sengupta worked in the hospital it was a residents' common room.

Inscription on the wall of Ronald Ross's laboratory

All India Institute of Medical Science 800 bed hospital 16-9-86 J352 Regarded as the best medical centre in India. I lectured there on the day after the tied cricket test between India and Australia in Madras in September 1986.
(Assistance for the India section from Kamal Sengupta)

China

Graduates from Guy's Hospital, London influenced some parts of China and one of these doctors was Peter Parker who worked as a missionary in Canton in 1837. He engaged a Chinese artist to paint his patients for him. He presented 23 paintings in all to the Gordon Museum at Guy's hospital where they are now housed.

H618 Pleomorphic adenoma parotid Peter Parker 1837 M43 Removed in 45 secs

H613 Hoo Loo M32 brought to Guys by Peter Parker's predecessor in 1825 for Astley Cooper to operate. It was done in a large lecture theatre with 680 people watching. Hoo Loo endeared himself to staff, students and everyone. It was a very sad end when he died following the operation. Many students gave blood for him, but this must have been very primitive. The tumour was removed in 2.5 minutes and it weighed 56 pounds.

H614 Scarring from a burn. He has 4 fingers on his right hand. Peter Parker Canton 1837. Photo 1-12-83

H620 Lipoma in the neck Peter Parker 1837 F 20 present 10 yrs. Extended to the umbilicus. Off in 12 secs.

H616 Peter Parker. This 45 year old woman was a silk embroiderer. She said that to have surgery there would be pain for some minutes, but now she had pain all the time. The tumour was off in 2.5 minutes. We are not told about the post operative course, but she was well 3 years later. She lay quietly on the table while they operated and was very stoical about it. (If anyone has seen the bleeding that occurs when a breast is removed, one can only admire this lady, and the surgeons who were operating without anaesthetic or suture materials.)

AFIP calendar 2002. Entrance to Guy's Hospital on the left. After walking across London Bridge from the City of London one turns left into St. Thomas' Street and on the right is Guy's Hospital. Looking back across the road one sees St. Thomas' Church. In the attic of the church is the operating theatre that was closed in 1862 when St. Thomas' Hospital was demolished to make way for the rail connection between London Bridge and Charing Cross and relocated to its present position on the south bank of the Thames River opposite the houses of Parliament. The office of the Professor of Pathology at St. Thomas' now has a wide glass window view of the river and the houses of Parliament.

The first hospital on the site opposite Guy's Hospital was built in 1106 and was run by Augustinian monks and sisters.

The operating theatre was sealed off from 1862 until a few years ago when it was 'found' again. It has been somewhat restored and now represents an authentic record of what a state of the art operating theatre of 1862 looked like.

The attic is now a museum called the Old Operating Theatre and Herb Garret Museum. It is entered via the church, and one climbs a very narrow and steep spiral staircase in the tower with hand ropes provided for assistance in climbing.

In the picture on the right the church can be seen in the middle of the old hospital. The women's ward is on the right and seen here. The male ward was on the other side of the church. Doors connected the two wards to the operating theatre. Patients were blindfolded and then held down while the surgeon operated.

My photo of the St. Thomas' operating theatre. The operating table has a shelf at its foot near the camera. This was pulled out when a patient was to have an amputation of the leg. There is a box of sawdust on the floor that the surgeon could kick under the leg to soak up some of the blood. There was a layer of sawdust in the ceiling of the church to also collect blood.

On the wall there is a black and white painting showing the operating scene.

The colour copy of the famous painting that was once in the Hunterian Museum of the RCS England. It demonstrates the 'anaesthetic procedure.'

(Information from the Curator of the Herb Garret Museum, and William Edwards, Curator of the Gordon Museum.)

South Africa

Cape Town Table Mountain from Blonberg Beach 16-6-91 L309.

The University of Cape Town probably has the oldest Medical School in Africa south of the Sahara. The University of Cape Town act of parliament was passed on 5th April 1918 when the university was constituted from the South African College that had previously been established as a centre for higher education and training in 1829. Training in the basic sciences had long been established preparatory to sending

successful students to Edinburgh to complete their medical studies and the first of these (Dr GF Fisser) graduated in Edinburgh in 1909. The first two medical professors came from Edinburgh University (RB Thompson and William A Jolly in anatomy and physiology) in 1911, before the University had been enacted and they served in the South African College. They commenced teaching early in 1912 but their proper laboratories were only opened on Thursday 6th June 1912, from where successful students were sent to Edinburgh University to complete their training. This day is considered to be the birthday of the Medical School.

Training in the third year of study in Pathology, Bacteriology and Pharmacology began in 1919 with the earlier arrival of Prof W Blair Martin (pathologist from Glasgow. He died from influenza in October 1918 before he started teaching), Prof AJ Clark (pharmacologist from Cambridge and St Bartholomew's Hospital) and TJ Mackie (Bacteriologist from Glasgow). However students completing the first two years of training during the period 1917 to 1919 were now mainly opting to complete their training (and play rugby) at Guy's Hospital in London though some still went to Edinburgh or Glasgow and other London hospitals. The first clinical departments were established in 1919 with the appointments of Prof AW Falconer (Internal Medicine from Scotland), Prof CFM Saint (Surgery from England) and Prof EC Chrichton (Obstetrics & Gynaecology from Ireland).

The University graduated its first two medical doctors at the end of 1922. They were Louis Mirvish and JB Solomon. At that time Prof Maxwell Drennan from Edinburgh had taken over the chair in Anatomy, JWC Gunn headed Pharmacology, GB Bartlett took over Pathology until 1924 and Benjamin Ryrrie from Edinburgh succeeded him in 1925. JWC Gunn was the first dean and he was followed by Benjamin Ryrrie.

The University of Witwatersrand in Johannesburg formed a medical faculty and started training doctors in 1919. Their first graduates appeared in 1924. I do not know any thing about their early staff appointments but suspect that apart from Raymond Dart (Professor of Anatomy from Australia) the senior staff came from Britain and Ireland.

Stellenbosch University emerged from the Victoria College that was established in 1866 and became the foremost centre for higher education and training in the Afrikaans language. I believe that their University act was passed at about the same time that UCT came into being, however their medical school only started in 1957 while I was a second year undergraduate student at UCT. Their first professor of pathology was Horst Weber and first professor in Microbiology was Hans Brede who both were recruited from Germany. I believe that all the other senior appointments were South African trained, mostly from UCT.

A Medical School was established in the twenties or early thirties at University of Pretoria previously called Transvaal Universiteit Kollege for Afrikaans speakers.

More recently the University of Natal established a medical school in 1947 for indigenous Africans, Coloureds and Indians as did Free State University in Bloemfontein for white Afrikaaners.

Medunsa was established for black people but is now amalgamated into University of Limpopo and most recently in 1996 a medical school was established in Umtata initially called University of Transkei but now named Walter Sisulu University. It is interesting that political refugees from Poland were the early professors in pathology at Medunsa and at University of Transkei.

The founding chair of pathology at Natal University (now University of Kwa Zulu Natal) was Prof Okkie Gordon who arrived from UCT but he developed a greater interest in Forensic pathology and John Wainwright came in 1950 from Sheffield, UK to initially work with Prof Gordon and later took up the separated chair of anatomical pathology. John's daughter Helen is now a consultant perinatal and pulmonary pathologist at UCT.

The medical school at Harare in Zimbabwe was established in the late sixties or early seventies while it was Salisbury in Southern Rhodesia as a college of Birmingham University, UK. The first chair of pathology was held by a Prof Cruickshank from UK, who was followed by Tim Ashworth, a Zimbabwean who had trained at UCT.

Since then medical schools have been established at Lusaka, in Zambia, and at Blantyre, in Malawi with help from UK (St Thomas' Hospital, London) and South Africa. There also are universities with medical schools at Luanda, in Angola, Kigali in Rwanda, Maputo in Mozambique and in Kinshasha in Democratic Republic of Congo while I understand that Namibia is in the process of doing so in Windhoek. Medical Schools also exist in Kenya (2) at Nairobi and Eldoret and in Tanzania (2) at Dar es Salaam (Muchs college) and Moshi.

Prof J Cameron from UK was the first professor of pathology in Nairobi. He was succeeded by locals David Gatei and Alfred K'Ungu who had trained in Uganda. The medical schools in Nairobi and Dar es Salaam were established after the break-up of the University of East Africa in Uganda in 1970.

Makarere University in Kampala, Uganda was the flagship University and Medical School in East Africa. I believe that it was the first such institution situated between the tropics on the African continent. This was in 1922 when it started as a technical school that became a college of higher education in 1937 and was affiliated to University College London in 1949 until 1963 when it became the University of East Africa until 1970. Now it is again Makarere University, but of the Republic of Uganda. Their early pathology teaching staff mainly came from UK and included people like JPN (or JNP) Davies and Michael Hutt (from Wales) while Denis Burkitt was the ENT surgeon and the American pathologists, Daniel H Connor and Chuck Vogel also spent time there. Their first African Professor was Raphael Owor.

I am afraid that I cannot give you information about Anglophone or Francophone West Africa except to say that there are several medical schools in Nigeria where the one at Ibadan is their flag ship and probably was their first. I know that Prof Eddington from UK was their first Head of Department in pathology and that AO (Femi) Williams, his deputy became their first African Professor. Femi is a former international vice-president of the IAP who with me represented Africa. He moved to USA but now spends more time in Nigeria.

(This information was provided by Roc Kaschula)

Malaysia

M690. In the medical complex in the centre of Kuala Lumpur, Malaysia, the oldest building is the Institute of Medical Research. (Now heritage listed). It is now called the Field Building after John W. Field (of the Field stain for malaria parasites) one of its many eminent researchers and a former Director.

The Institute was established by the British in 1900 as a research centre for tropical and infectious diseases.

Under British rule, medical students were taught at the University of Singapore. The University of Singapore medical school was founded in 1905. After the Independent Federation of Malaysia was declared in 1963 it became the National University of Singapore.

In 1961 the University of Malaya was founded in Kuala Lumpur and a new medical school was formed and opened in 1963. It was staffed mainly by British doctors.

In 1973 the National University of Malaysia was established particularly for the education of Malay students. In 1997 a new University teaching hospital and medical school was established at a site away from the centre of Kuala Lumpur.

M691 Kuala Lumpur opening of what is now called the Field building in 1900.

Taiwan

A small village on the N coast of Taiwan formerly Formosa (beautiful island). This was a centre of mining, and miners came from mainland China to work there. This small street that runs down a steep hill was a brothel area for the miners. The buildings are now restaurants. 2004.

The Englishman Patrick Manson worked in Formosa before he moved to Hong Kong. Formosa had a range of European countries vying for its facilities Portuguese, Dutch and English.

Hong Kong

The Hong Kong Medical School named after the man who donated some millions of dollars towards its construction is at the foot of a steep hill about 800 metres below the main teaching hospital.

Students passing the Patrick Manson building about half way up the hill from the medical school to the hospital.

A glimpse at Pathology in Hong Kong

The development of medicine in Hong Kong was strongly influenced by graduates of the University of Aberdeen, Scotland, and later by graduates of the University of Edinburgh.

The first medical school in Hong Kong was established in 1887. In 1912 the University of Hong Kong was officially founded, and the College of Medicine became the first Faculty of the fledgling University.

Three doctors were especially responsible for the establishment of the first medical school in 1887.

Patrick Manson (1844 – 1922) was the first Dean of the Hong Kong College of Medicine for Chinese, established in 1887. He graduated from the University of Aberdeen. From 1866 – 1889 he worked in China and Formosa (now Taiwan) as an employee of British Imperial Maritime Customs. During this time he acquired an

extensive knowledge of tropical diseases. One of his most important discoveries was that filariasis was transmitted by a mosquito. While working in Formosa, he began teaching Western Medicine to Formosan students.

Ho Kai (1859 – 1914) another doctor who was instrumental in establishing the Medical College also graduated from the Uni of Aberdeen.

James Cantile (1851 – 1926) another founding doctor graduated from the Uni of Aberdeen. The connection with that University has persisted.

Later appointments:

Gordon King (1900 -) graduated from Edinburgh University and was Professor of Obstetrics and Gynaecology in the Peking Union Medical College in Beijing from 1927 – 1931.

He came to Hong Kong in 1938 and was Professor of O&G from 1938 – 1956. He then became the Foundation Dean of the Medical Faculty in the University of Western Australia from 1956 – 1966. This was followed by being Dean of Medicine in the University of Nairobi 1966 – 1971.

James Gibson, a graduate of Edinburgh University was Professor of pathology from 1963 – 1984. He oversaw the installation of all the new technological advances that occurred during his 20 year tenure and he helped it to gain an international standing as a centre of Research, Teaching and Service.

(Information for this section was obtained from speaking with various staff members in Hong Kong, including very valuable information from Prof. LC Chan (HKU) and Prof. HK Ng (CUHK), and from the publication:

Evans DE. Constancy of Purpose – Faculty of Medicine University of Hong Kong. Hong Kong University Press, Hong Kong. 1987)

Plaques on the wall at the entrance to the pathology department of Queen Mary Hospital. It is a combined hospital and university department. In the early 1900s Tropical Medicine was a glamour specialty in Medicine and there was plenty of scope for this in Hong Kong.

Queen Mary Hospital Hong Kong at the top of the hill. (photo courtesy of Mr. Jaggar Lau)

Indonesia

J397 8-7-87 University of Indonesia This building was opened in 1920.

J396 8-7-87 Indonesia Faculty of Medicine RC with the oldest Prof in the Faculty. She was a parasitologist. The Dutch architecture is evident.

The first medical school in Indonesia was opened in Jakarta in 1851 to teach medical assistants. In 1902 a proper medical course was introduced and it was further upgraded in 1913. A second medical school was opened in Surabaya in 1913 and both degrees were recognised in Holland in 1920.

The schools were originally staffed by Dutch physicians, including one Nobel Prize winner who found the cause of beri beri. By the early 1900s Indonesian nationals were being appointed to senior positions.

The first medical school in Indonesia was established in January 1851 and was called the school for the Dokter Jawa (Javanese physician) with 12 pupils all of whom had only primary school level education. From this group 11 graduated two years later.

Instruction was in the Malay language. They were given the degree of Dokter Djawa, but in reality they were only utilized as smallpox vaccinators. The first director was Dr. P. Bleeker, a military officer.

Initially all pupils were from Java, but after 1856 natives from other islands were accepted.

From 1864 the curriculum was extended to three years.

In 1875 a major change took place and the length of study became seven years.

The 7-year-curriculum comprised 2 years of preparation, during which they were taught the Dutch language, and 5 years medical education.

From 1890 knowledge of the Dutch language was a prerequisite.

From 1888-1896 the Director of the school was the Nobel Prize winner Christiaan Eijkman, who concurrently was the Director of the laboratory where he performed his research/experiments with chickens fed with polished and unpolished rice, and so discovered what is now known as vitamin B1 as the cause of beri-beri, for which about thirty years later he was awarded the Nobel Prize.

In 1902 the curriculum was extended to 9 years and the name of the school was changed to STOVIA (School tot Opleiding voor Inlandsche Artsen = School for Education of Indigenous Physicians).

Since 1913 the nomenclature of Inlandsch arts, both in the name of the school as well as the degree of the graduates was changed to Indisch Arts (literally Netherlands Indies physician).

Also since 1913 the curriculum was prolonged to 10 years.

Also in this year, on September 15, 1913, the second medical school was opened in Surabaya, called the NIAS (Nederlands Indische Artsen School = School for Netherlands Indies Physicians), with the same curriculum as the STOVIA. The graduates also got the degree of Indisch Arts.

In 1920 the STOVIA moved to the new building in Salemba 6 (which is quite familiar to you) next to the Central Public Hospital, known as the CBZ (Centrale Burgerlijke Ziekeninrichting) which was opened a year earlier in 1919, and which was used as the teaching hospital.

Ultimately on August 9th, 1927, medical education officially became part of higher learning with the opening of the GHS (Geneeskundige Hoogeschool, literally Medical College). The standard of the school was equal to the medical schools in the Netherlands and the graduates were valued the same as graduates from universities in the Netherlands. The STOVIA was gradually closed by not accepting new pupils. The last pupils graduated in 1935.

In 1940 the GHS became de Geneeskundige Faculteit van de Universiteit van Nederlandsch-Indie = the Faculty of Medicine of the University of the Netherlands Indies).

(This information was provided by S.T. Himawan)

Rolf ten Seldam the foundation Professor of Pathology at the University of Western Australia used to tell his staff about the wonderful post graduate training that Dutch doctors used to get in the Dutch East Indies. (note the Nobel Prize winner Christiaan Eijkman.) For a time it was almost essential for anyone wanting a Professorship in Holland to have done some research work in the Dutch colonies. Rolf was Head of the Cancer Unit in Bandung for some years before WW2 and he told me about the great library they had in his institute which included the doctoral theses of many of the future professors for Holland. When I did visit Bandung the library was just as he had described it. (Robin Cooke.)

J472 13-7-87 Indonesia Faculty of Med University of Arlangger Surabaya Opened on September 15, 1913.

J473 13-7-78 Indonesia entrance to Surabaya hospital on the opposite side of the road to the University.

J474 13-7-87 Indonesia. Surabaya hospital covered walkways reminiscent of the Dutch architecture. 13-7-87

O534 8-10-02 Tropen Institute Amsterdam The centre of Dutch academia for their colonies especially Indonesia, the old Dutch East Indies. It used to be a very active place of research and teaching, but it has become more an administrative building now.

O536 8-10-02 Tropen Institute Amsterdam entrance to the Institute and the lecture theatre behind it.

Japan

L814 Mt Fuji from the speeding Shinkansen

L836 Golden pagoda a Zen temple in Kyoto

Map of Japan with place names to be mentioned in the lecture

Nagasaki

Franz Phillip von Siebold who was born in Wurzburg into the medical family that dominated the Uni for about 100yrs from 1760. After graduation he travelled to Holland to get employment. He was appointed surgeon to the Dutch East India Company trading post in Nagasaki, Japan.

From this base, Philipp Franz made a great impact which resulted in his being revered in Japan, and especially in the city of Nagasaki. He married a Japanese woman and they had a daughter who became a prominent doctor in Nagasaki. When he returned to Europe he settled in the University city of Leiden where he wrote treatises on the material he had collected during his years in Japan. In the University grounds he established a medicinal herbal garden in which he planted some of the botanical specimens he brought with him from Japan.

The Dutch government would not allow him to bring his Japanese family with him from Japan, so he married a German woman and had a son, Alexander who became a doctor. Alexander accompanied his father to Japan on his second visit there in 1859, married a Japanese woman and remained to work as a doctor in Japan. None of Siebold's Japanese family had visited Wurzburg until a few years ago when a fifth generation daughter married to an American serviceman based in Wurzburg delivered their first daughter in the Elias von Siebold Maternity Hospital.

He spent the last years of his life in Munich. He is buried in a cemetery across the road from the Ludwig Maximillians University pathology department. His tombstone bears his coat of arms and has written on it in German and Japanese 'Siebold, Explorer of Japan.'

This is a bust of Siebold in the Siebold memorial park in Nagasaki. There is a similar one in the grounds of the Siebold museum in Leiden.
(Help with this section was given by Gerhard Haneveld, Gerhard Stauch, Peter Meister, Wolfgang Klein-Langner, Kazuaki Misugi)

Germany

Portrait of Rudolph Virchow (1821-1902) in the Pathology Dept University of Wurzburg. (This is the only portrait in which I have seen him smiling happily.) Wurzburg must have been a very pleasant and satisfying period of his life after the tumultuous time he had just had in Berlin where his political views were at variance with those of the authorities. Here he was able to give lectures and write his book on Cellular Pathology. When he returned to Berlin about 6 years later he gave his inaugural lectures on his theory of cellular pathology, and those who came to Charite Hospital to hear them were able to walk down the Unter den Linden by the light of gas lights that had just been installed and were switched on at that time.

L200 4-12-90 Berlin entrance to Virchow Institute.

L203 Berlin 4-12-90 Entrance to the Virchow Institute.

AFIP Calendar the lecture theatre opened to commemorate Virchow's 80th birthday in 1901

L218 4-12-90 Berlin. Virchow Institute lecture theatre built in 1901 to celebrate Virchow's 80th birthday. Not much changed since 1901.

Japan again Tokyo

The red gate which is the entrance to a driveway lined by Ginkgo trees that leads to the Pathology Dept of Tokyo University. The son of the Maeda family (one of the local lords) who owned the land on which the University is built, married the daughter of the Shogun, and as a mark of distinction he was allowed to use a red gate opening onto the property.

The medical school of the University of Tokyo originated in a medical school opened in Edo (Tokyo) in 1861 in the era of the Tokugawa Shogunate a few years before the Meiji Restoration. It was formally constituted as the first full faculty in Tokyo University in 1869.

(Rikuo Machinami)

Tokyo University. Anatomy on the left and pathology on the right.

The wooden skeleton that was used by a 'bone setter' in the early 1800s to teach students how to 'set' fractures.

After the opening of Japan, the Emperor decided that the Tokyo University staff would go to Germany for their post graduate education. Katsusaburo Yamagiwa the second professor of pathology in Tokyo University went to work in the department of Rudolph Virchow in Berlin. At that time in Germany the chemical and dye industries were receiving a great deal of attention. It was the era of the great chemist, Paul Ehrlich (1854-1915). There Yamagiwa began experimenting on the possible toxic effects of chemical substances, particularly coal tar a breakdown product of the

burning of coal. He painted a rabbit's ear every day for 660 days and produced an SCC. He reported his findings in 1914. This provided experimental proof of the empirical observation of Percival Pott of St. Bartholomew's Hospital London 200 years before, that chimney sweep's scrotal cancer was due to some substance that came from the residual soot from burning coal in the heating fires in London houses.

Specimen of a rabbit ear with an SCC induced by the application of coal tar for 660 days. In the pathology museum in Tokyo University department of pathology.
(Information for this section provided by Rikuo Machinami)

RC at Jikei University, Tokyo with Eisei Ishikawa. The portrait is of Kanehiro Takaki (1849-1920) who went against the trend to go to Germany for post graduate training, and instead, under the influence of an English doctor with whom he worked in Tokyo he went to London for 5 years to work at St Thomas' Hospital. He liked the English approach to examining and treating patients. At St Thomas' he met the nursing tradition established by Florence Nightingale in that hospital at about that time, and when he returned to Japan he built a new hospital and medical school based on the English model. He also introduced a training course for nurses on the Nightingale model.

Takaki's hospital which became Jikei Medical School was built to treat poor patients free of charge. His grandson was Professor of Pathology at Jikei and his great grandson, also a pathologist, is now the Director of the new, recently constructed Jikei Hospital.

The doctors at the Tokyo University became associated with the Imperial Japanese army and those at Jikei became associated with the Imperial Navy. Kanehiro became the surgeon general of the Imperial Navy, and he is wearing that uniform in the portrait on the wall.

(Information for this section from Eisei Ishikawa and Shinichiro Ushigome.)

St Thomas' Hospital in 1871 soon after it opened and as it would have looked when Takaki studied there. (Photograph courtesy of the Friends of St Thomas' Hospital)

Fukuoka

Sunao Tawara (1873-1952) one of the first Professors of Pathology at the Fukuoka University honoured by having a road in the University grounds named after him. He studied in the Department of Ludwig Aschoff in Freiburg from 1903-1906. While there he found the AV node, called in Germany Tawara's node. This contributed to knowledge of the conduction pathways in the heart.

Tawara's doctoral thesis which was on the bookshelf of the current professor. The pages had not been cut when I photographed it.

Photograph of Ludwig Aschoff and his post graduate students with Tawara on his left.

Shibasaburo Kitasato a famous Japanese microbiologist who went to Berlin to study with Robert Koch. A University near Yokohama is now named after him.

RC with Kazuaki Misugi at a memorial to mark the visit of Robert Koch to Japan to visit Kitasato. It is in a park that overlooks the Pacific Ocean. Originally it was on the other side of the road with a view of Mt Fuji.

Thailand

Siriraj Hospital the teaching hospital of the Mahidol University Medical School in Thailand approached from the river. The pathology department was established by an American, AG Ellis with a Rockefeller Foundation grant from 1919-1921. Ellis was the first pathologist in Thailand.

A display in the tropical medicine section of the Historical museum in the Siriraj Hospital pathology department. Filariasis.

A large filarial scrotum removed surgically. Mahidol University Medical Museum Tropical Diseases section.

(Information for this section from Tumtip Sangruchi and Thiti Kuakpaetoon)

Argentina

French Embassy in Buenos Aires

European immigrants to Argentina came mainly from Spain and Italy. It is said that Argentinians speak Spanish with an Italian accent. Many of the stately houses in Buenos Aires were built by Basque immigrants from the north of Spain. So the architecture is reminiscent of these influences.

The three most important influences from Europe to Argentina in pathology were from Germany, Spain and Austria.

From Germany a major influence came from the school of Ludwig Aschoff from Freiburg, and from Hamperl, Rössle and Borst from Berlin.

Two outstanding pathologists from Buenos Aires, Argentina who trained in Germany were José María Lascano Gonzalez, who trained in Freiburg with Aschoff, and his brother Julio César Lascano Gonzalez, who trained in Berlin with Hamperl, Rössle and Borst.

José María and Julio César were outstanding pathologists. Julio Cesar was one of the first Professors of Pathology at the Buenos Aires University and José María was chief of Pathology of the German Hospital of Buenos Aires. (There was also an Italian hospital).

In 1936, Pío del Rio Horteiga, assistant of the Nobel Prize winner Ramon y Cajal, moved from Spain to Argentina and performed important investigations on the central nervous system. His Argentinian disciples were Moises Pollack and David Cellener.

Pollack was known for his work on tumours of the Central Nervous System.

From Vienna, Austria, Professor Jakob Erdheim (Professor of Pathology of the Hospital of Vienna University), trained Dr. Fritz Schajowitz (my mentor) who emigrated in 1940 to Buenos Aires and was the chief editor of the first and second WHO International classification volumes on Bone Tumors (in 1972 and 1993).

Eduardo Santini Araujo.

A historical home converted to an annex to a modern hotel. It is used for dinners and receptions

Buenos Aires the pink house where the President resides and has an office. Tourist buses pass in large numbers around the square. Oct 2005

Buenos Aires school of medicine

Fritz Schajowicz Argentine orthopaedic pathologist who graduated from Vienna in 1911 and was the author of first and second editions of WHO bone tumours. He was Eduardo Santini Araujo's mentor and teacher from 1975. He himself was a pupil of Jakob Erdheim from Vienna.

Max Borst first in Berlin and then in Munich. A photograph sent to Julio Cesar Lascano Gonzales.

Max Borst a former director of the Pathology Department of the Ludwig Maximillians University in Munich with a successor, Peter Meister and the present director, Thomas Kirschner. Borst wrote extensively on soft tissue tumours.

L to R Jose Maria Lascano Gonzalez, Prof. Nicod, Julio Cesar Lascano Gonzalez

Hamperl visiting Buenos Aires from Vienna (left) and Moises Pollack (centre) disciple of Pio del Rio Hortega from Madrid in Argentina.
(Information for this section from Eduardo Santini-Araujo)

Brazil

Sao Paulo cathedral one of the first buildings in the city.

There were 4 European pathologists 2 from Germany, one from Austria and one from Italy who had a major influence on the development of pathology in Brazil from 1916 to 1942. They settled in the south of Brazil. In other cities such as Recife, Belem and Brasilia, Brazilian pathologists went to train in leading institutions in the US and to a lesser extent in Europe before returning to Brazil.

1. Walter Haberfeld, a German pathologist who was instrumental in establishing the Pathology Dept at the University of Sao Paulo Medical School (FMUSP) from 1916 to 1920.

His co worker was Alessandro Bonati, an Italian pathologist who was in Brazil from 1917-1923. Together they introduced the importance of clinico-pathologic conferences.

2. Walter Büngeler, from Munich, Germany did the same at the Dept of Pathology, Escola Paulista de Medicina, Federal University of Sao Paulo. (EPM/UNIFESP) (1936-1942).

3. Luigi Bogliolo, from Sassari, Italy was a WW2 refugee. He founded the pathology school at the Medical School of the Minas Gerais Federal University, in Belo Horizonte, Minas Gerais state.

Prof Bogliolo was an important researcher and influenced many Brazilian pathologists throughout the country.

4. Fritz Köberle, from Vienna, Austria worked for many years, at the Dept of Pathology of the Ribeirao Preto Medical School, from the University of Sao Paulo (Ribeirao Preto city, Sao Paulo state). Dr. Köberle was a clever researcher, who made seminal contributions to the pathogenesis of Chagas' disease, introducing the concept of sympathetic denervation in the persistence of the myocarditis, megaesophagus and megacolon which characterised the late stages of Chagas' disease.

We might mention Otto Wucherer (1820-1873) of *W. bancrofti* fame. He was born in Porto, Portugal and travelled to Bahia, Brazil with his German father. He was

educated in Germany and obtained an MD from the Uni of Tubingen. He then worked at St Bartholomew's Hospital in London and returned to Bahia in 1849.

O608 2-11-02 Brazil Sao Paulo highway to Rio de Janeiro. Not much traffic on this Sunday morning For most of the week days all lanes of the highway are filled with cars and trucks. Looking towards Ibirapuera Park

O610 2-11-2002 Brazil. Looking south from Ibirapuera Pk founded in 1950. Family orientated picnics and walking.

O611 2-11-02 Brazil Iberapuera park Monument to the first Portuguese settlers in 1554

Pasteur Institute AFIP calendar 2002 Opened in 1888. Other views taken in 1995. The Pasteur Institute opened laboratories in many tropical countries particularly in their former colonies as well as other countries such as Brazil. The main one there was in Sao Paulo.

An Institute to produce antisera such as was provided by the Pasteur Institute was established in Sao Paulo by Vital Brazil a medical researcher in 1901. This followed an epidemic in the rubber plantations. There was a problem in getting anti serum from Paris, so the locals decided that they could not rely on this source of supply and they needed to establish a serum laboratory of their own. They called it the Butantan. It is now a major producer of snake antivenom and other vaccines for the world market as well as for Brazil. From its inception it was staffed mainly by Brazilians but they had assistance from the Pasteur Institute and they maintain strong associations with the Pasteur Institute to this day.

The Pasteur Institute in Sao Paulo is still operating.

Bust of Louis Pasteur in front of the Pasteur Institute. 1981

Louis Pasteur tomb in the Pasteur Institute. The ceiling is decorated with ceramics depicting his experiments. Madame Pasteur raised money for this from the rulers of Europe.

Just inside the entrance gate to the Pasteur Institute there is a monument to Jupille the shepherd boy bitten by a rabid wolf. He was given Pasteur's rabies vaccine and survived. When this spectacular result became known, people came from all over Europe to be vaccinated.

(Information for this section provided by Marcello Franco and Adonis Carvalho.)

Chile

P63 Welcome to Santiago Chile overlooked by the western slopes of the Andes. Taken from the hill of the virgin 2002

Short history of the development of pathology in Chile

After many failed attempts to have Chilean physicians trained as pathologists in Europe, the Chilean government decided in 1907 to hire a German professor to establish a Pathology department for the public health system. Professor Max Westenhoeffer (1871-1957) a former student of Rudolph Virchow (1821-1902), was

recruited and appointed Professor of Anatomic and General Pathology at the University of Chile.

After a short stay he returned to Germany in 1911. During this period, no pathologists were trained. In 1930, Westenhoeffer was again hired to establish a Chilean School of Pathology.

One of his former students from Berlin, Dr. Ismael Mena (1902-1979), a prominent surgical pathologist, succeeded him as Chairman of the Institute of Pathology at the Hospital Salvador in Santiago. Mena continued the task of consolidating a Chilean School of Pathology.

Dr. Roberto Barahona (1908-1982), a Chilean student of Dr. Mena, founded the Department of Pathology at the Catholic University of Chile in Santiago, in 1945. He dedicated his life to the formation of pathologists. A fine and cultivated man, he attracted many young medical students to the specialty, and over 60 specialists have now passed through the postgraduate program at the Catholic University School of Medicine in the last few decades.

Chilean Pathology has been influenced by the German school of pathology and it is characterized by a strong emphasis on general pathology as applied to autopsy pathology and teaching in undergraduate and postgraduate courses. Surgical pathology, with its emphasis on diagnosis, has been a recent introduction to Chilean pathology, and most of the younger generation of pathologists have done postgraduate and postdoctoral studies in North America.

At present there are over 150 pathologists in active practice throughout the whole country. Scientific meetings are held every month and a National congress every year.

Ismael Mena with a picture on his office wall of the lecture theatre in Berlin on the occasion of the 80th birthday of Rudolph Virchow in 1901

Sergio Gonzales (right) and some of the senior pathologists in Santiago Chile.2005
(Information for this section provided by Sergio Gonzales.)

Bolivia

P647 Jesuit mission south east of Santa Cruz in Bolivia. A church in the central square of the mission village built by a Swiss Jesuit who also made musical instruments and taught the Indians to play them. This village is still famous for its musicians.

The buildings were made of wood and are beautifully decorated.

The Jesuits from Europe played an important role in bringing medicine to Bolivia and Peru.

P646 Jesuit mission south east of Santa Cruz in Bolivia. A church in the central square of the Mission built by a Swiss Jesuit viewed from the inner courtyard.

(Information for this section provided by Jaime Rios-Dalenz)

USA

The USA is so large and so diverse that it is hard to make any generalisations.

Whereas most of the countries considered so far were influenced mainly by one European country, the embryo medical schools in the USA had contacts with a much wider range of countries than was available to the ones mentioned already. Probably most of the newly forming medical schools in North America in the 1800s sent staff to learn about how it was being done in many countries in Europe. This was an

additional way of gaining the expertise of Europe to actually hiring staff from the European Universities which was done as well.

An example of this can be seen in what happened at the time of formation of the Medical College of Georgia.

AA62 Pathology at the Medical College of Georgia 1837

The page that tells the story of Louis Dugas.

AA 65 Louis Dugas Professor of Pathology at the Medical College of Georgia (1838-1850) was sent to Paris in 1834 with \$6000 to buy teaching material and books. He brought home some change which pleased the 6 administrators who had each donated \$1,000 to the cause.

AA 66 Smallpox back and white pictures of wax models probably bought in Paris. There are a few models of Donovanosis (granuloma inguinale) as well. This condition used to be fairly common in Georgia but it is now rare there.
(Information and photographs for this section provided by Fred and Jean Silva, with permission and considerable practical assistance from Stephen Peiper, Greer Falls and their assistants Julie and Carol from the Pathology Department of the Medical College of Georgia.)

I hope you have enjoyed this pictorial tour which illustrates some of the features of the global influence of European pathologists during the past 200 years or so. Their successors are still actively exerting their influence.

Robin A. Cooke
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